

ULTRAWIDE BANDWIDTH SYSTEM AND METHOD  
FOR FAST SYNCHRONIZATION USING MULTIPLE DETECTION ARMS

ABSTRACT OF THE DISCLOSURE

A system and method for fast synchronization of an incoming signal with a UWB receiver rapidly. The present invention synchronizes with a UWB receiver with an incoming signal. The present invention correlates a local pulse generated at the receiver with the incoming signal, finds a phase angle in the correlation function that would correspond to a high signal to noise ratio, thereby matching the receiver to the incoming signal phase, and operates the receiver at that phase. Exemplary options of fast synchronization include using multiple detection arms to compare one parameter of the correlation function to a predetermined threshold.

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